lenovo

Lenovo Z410/Z510/ Z510 Touch

Hardware Maintenance Manual

What to do first

When you do return an FRU, you must include the following information in the parts exchange form or parts return form that you attach to it:

1. Name and phone number of servicer
2. Date of service
3. Date on which the machine failed
4. Date of purchase
5. Procedure index and page number in which the failing FRU was detected
6. Failing FRU name and part number
7. Machine type, model number, and serial number
8. Customer's name and address

Note for warranty: During the warranty period, the customer may be responsible for repair costs if the computer damage was caused by misuse, accident, modification, unsuitable physical or operating environment, or improper maintenance by the customer.

The following is a list of some common items that are not covered under warranty and some symptoms that might indicate that the system was subjected to stress beyond normal use.

Before checking problems with the computer, determine whether the damage is covered under the warranty by referring to the following list:

The following are not covered under warranty:

- LCD panel cracked from the application of excessive force or from being dropped
- Scratched (cosmetic) parts
- Distortion, deformation, or discoloration of the cosmetic parts
- Plastic parts, latches, pins, or connectors that have been cracked or broken by excessive force
- Damage caused by liquid spilled into the system
- Damage caused by the improper insertion of a PC Card or the installation of an incompatible card
- Improper disc insertion or use of an optical drive
- Diskette drive damage caused by pressure on the diskette drive cover, foreign material in the drive, or the insertion of a diskette with multiple labels
- Damaged or bent diskette eject button
- Fuses blown by attachment of a nonsupported device
- Forgotten computer password (making the computer unusable)
- Sticky keys caused by spilling a liquid onto the keyboard
- Use of an incorrect AC adapter on laptop products

The following symptoms might indicate damage caused by nonwarranted activities:

- Missing parts might be a symptom of unauthorized service or modification.
- If the spindle of a hard disk drive becomes noisy, it may have been subjected to excessive force, or dropped.

Power system checkout

To verify a symptom, follow the steps below:

1. Turn off the computer.
2. Connect the AC adapter.
3. Make sure that power is supplied when you turn on the computer.
4. Turn off the computer.
5. Disconnect the AC adapter.
6. Make sure that the battery pack supplies power when you turn on the computer.

If you suspect a power problem, see the appropriate one of the following power supply checkouts:

- “Checking the AC adapter” on page 21
- “Checking operational charging” on page 21

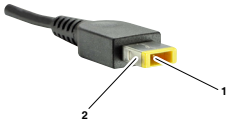
Checking the AC adapter

You are here because the computer fails only when the AC adapter is used.

- If the power-on indicator does not turn on, check the power cord of the AC adapter for correct continuity and installation.
- If the computer does not charge during operation, go to “Checking operational charging”.

To check the AC adapter, follow the steps below:

1. Unplug the AC adapter cable from the computer.
2. Measure the output voltage at the plug of the AC adapter cable. See the following figure:



Pin	Voltage (V DC)
1	+20
2	0

Note: Output voltage for the AC adapter pin No. 2 may differ from the one you are servicing.

3. If the voltage is not correct, replace the AC adapter.
4. If the voltage is acceptable, do the following:

- Replace the system board.
- If the problem persists, go to “Lenovo Z410/Z510/Z510 Touch” on page 26.

Note: Noise from the AC adapter does not always indicate a defect.

Checking operational charging

To check whether the battery charges properly during operation, use a discharged battery pack or a battery pack that has less than 50% of the total power remaining when installed in the computer.

Perform operational charging. If the battery status indicator or icon does not light on, remove the battery pack and let it return to room temperature. Reinstall the battery pack. If the charge indicator or icon is still off, replace the battery pack.

If the charge indicator still does not light on, replace the system board. Then reinstall the battery pack.

Related service information

This chapter presents the following information:

- “Restoring the factory contents by using OneKey Recovery” on page 23
- “Passwords” on page 24
- “Power management” on page 25

Restoring the factory contents by using OneKey Recovery

Restore of factory default

The Lenovo Z410/Z510/Z510 Touch computers come with pre-installed OneKey Recovery System.In order to save application files and the initial backed up files of the system, the hard disk in a Lenovo computer includes a hidden partition when it is shipped. If you need to restore the system to the point of your first boot up, just enter Lenovo OneKey Recovery System and run **System Recovery**. For details of OneKey Recovery System, see *the User Guide for Lenovo OneKey Recovery system*.

Note: This will delete all the new data on the system partition (C drive), which is not recoverable. Make sure to back up your critical data before you perform this action.

When you use the recovery discs to boot your computer, the system will enter the user interface for system recovery automatically. Please follow the prompt to insert the backup discs to complete the whole recovery process.

Note: The recovery process might take up to 2 hours.

Passwords

As many as three passwords may be needed for any Lenovo computer: the power-on password (POP) , Hard-disk password, and the supervisor password (SVP).

If any of these passwords has been set, a prompt for it appears on the screen whenever the computer is turned on. The computer does not start until the password is entered.

Power-on password

A power-on password (POP) protects the system from being powered on by an unauthorized person. The password must be entered before an operating system can be booted.

Hard-disk password

There are two hard-disk passwords (HDPs):

+ User HDP - for the user

+ Master HDP - for the system administrator, who can use it to get access to the hard disk drive even if the user has changed the user HDP

Attention: If the user HDP has been forgotten, check whether a master HDP has been set. If it has, it can be used for access to the hard disk drive. If no master HDP is available, neither Lenovo nor Lenov authorized service technicians provide any services to reset either the user or the master HDP, or to recover data from the hard disk drive. The hard disk drive can be replaced for a scheduled fee.

Administrator password

If the Administrator password has been forgotten and cannot be made available to the servicer, there is no service procedure to reset the password. The system board must be replaced for a scheduled fee.

Power management

Note: Power management modes are not supported for APM operating system.

To reduce power consumption, the computer has two power management modes: screen blank and sleep (standby).

Screen blank mode

If the time set on the “Turn off monitor” timer in the operating system expires, the LCD backlight turns off.

To end screen blank mode and resume normal operation, press any key.

Sleep (standby) mode

When the computer enters sleep (standby) mode, the following events occur in addition to what occurs in screen blank mode:

- The LCD is powered off.
- The hard disk drive is powered off.
- The CPU stops.

To enter sleep (standby) mode, To put the computer to sleep, do one of the following:

- Close the display panel.
- Press the power button.
- Open the Charms and then select **Settings** → **Power** → **Sleep**.

Attention: Wait until the power indicator light starts blinking (indicating that the computer is in sleep mode) before you move your computer. Moving your computer while the hard disk is spinning can damage the hard disk, causing loss of data.

To wake the computer, do one of the following:

- Press any key on the keyboard.
- Press the power button.

Lenovo Z410/Z510/Z510 Touch

This chapter presents the following product-specific service references and product-specific parts information:

- “Specifications” on page 26
- “Status indicators” on page 28
- “Function key combinations” on page 30
- “FRU replacement notices” on page 31
- “Removing and replacing an FRU” on page 32
- “Locations” on page 81
- “Parts list” on page 84

Specifications

The following table lists the specifications of the Lenovo Z410/Z510/Z510 Touch:

Table 1. Specifications

Feature	Description
Processor	• View the system properties of your computer. You can do this as follows: Open the **Control Panel**, and then select **System and Security** → **System**.
Core Chipset	• Intel Panther Point HM86
Bus architecture	• GPU: PCIe 3.0, 8 GT/s • WLAN: PCIe 2.0, 5 GT/s • RAM: DDR3L, 1600 MT/s • DMI x 4, 5 GT/s • FDI x 2, 2.7 Gb/s • LCD: eDP 1.2, 5.4 GT/s • HDMI Port: HDMI 1.4, 1.65 GT/s • HDD: SATA 3.0, 6 Gb/s • ODD: SATA 1.0, 1.5 Gb/s • USB Port: USB 3.0, 5 Gb/s • USB 2.0, 480 Mb/s • BT: USB2.0, 480 Mb/s • Card Reader: SD3.0, 50 Mb/s • VGA • SMBus 2.0 • LPC 1.1 • HDA • SPI
Graphic memory chip	• Nvidia N14P-GV2 • Intel HD Graphics 4600
Display	• 14" 16:9, 1366 × 768 pixels HD WXGA/200 nits, 1600x900 HD+/250 nits(option) (Z410) • 15.6" 16:9, 1366 × 768 pixels WXGA/200 nits, FHD 1920x1080 pixels (Z510/Z510 Touch)

Table 1. Specifications (continued)

Feature	Description
Standard memory	• DDR3-1600/1333MHz SODIMM × 2 (max 16 GB)
CMOS RAM	• 256 Byte
Hard disk drive	• 2.5-inch, 7 mm/9.5 mm SATA • 500 GB / 750 GB / 1TB 5400 rpm /8GB + 500 GB SSHD/8GB + 1 TB SSHD
Optical drive	• 2.5" Internal 9.5mm, Rambo, blue-ray Rambo (option)
I/O port	• Combo audio jack × 1 • RJ45 × 1 • HDMI port × 1 • USB 2.0 port × 1, USB 3.0 port × 2 • 2 in 1 slot × 1 (SD/MMC)
Audio	• 1/8" Combo audio jack • 2 × 1.5 W speakers
Ethernet (on the system board)	• 10/100M
PCI Express Mini Card slot	• 1 slot
Bluetooth wireless	• Combo w/ Wifi, BT 4.0 option
Keyboard	• 6 Row, ISO Full Size Keyboard
Touch pad	• Multi-touch type
Integrated camera	• 0.3 M/1.0 M (HD) pixels (Z410/Z510) • 1.0 M (HD) pixels (Z510 Touch)
Battery	• 4 cell, 41.6 Wh or 48 Wh
AC adapter	• 20 V, 65 W or 90 W
Pre-installed operating system	• Win8

Status indicators

The system status indicators below show the computer status:

Z410

Z510/Z510 Touch

Table 2. Status indicators

Indicator	Indicator status	Charge Status	Meaning
Power	On (solid white)	---	The computer is powered on.
	Blinking	---	The computer is in sleep mode.
	Off	---	The computer is powered off.
2 Battery	On (solid white)	Charging	The battery has more than 80% charge.
		Discharging	The battery has more than 20% charge.
	On (solid amber)	Discharging	The battery has between 5% and 20% charge.
	Blinking slowly (white)	Charging	The battery has between 20% and 80% charge. When the battery reaches 80% charge, the light will stop blinking. However, charging will continue until the battery is fully charged.
	Blinking slowly (amber)	Charging	The battery has less than 20% charge. When battery charge reaches 20%, the blinking color will change to white.
	Blinking quickly (amber)	Charging/ Discharging	The battery has less than 5% charge.

Function key combinations

The following table shows the function of each combination of function key.

Table 3. Fn key combinations

Key combination	Description
Fn + PgUp:	Enables/disables the scroll lock.
Fn + PgDn:	Activates the system request.
Fn + Home:	Activates the pause function.
Fn + End:	Activates the break function.
Fn + Space (on select models):	Enables/disables the keyboard backlight.

Table 4. Hotkeys

F1:	Mutes/unmutes the sound.
F2:	Decreases the volume level.
F3:	Increases the volume level.
F4:	Closes the currently active window.
F5:	Refreshes the desktop or the currently active window.
F6:	Enables/disables the touchpad.
F7:	Enables/disables Airplane mode.
F8:	Displays all currently active apps.
F9:	Turns on/off the backlight of the LCD screen.
F10:	Toggles the display between the computer and an external device.
F11:	Decreases display brightness.
F12:	Increases display brightness.

FRU replacement notices

This section presents notices related to removing and replacing parts. Read this section carefully before replacing any FRU.

Screw notices

Loose screws can cause a reliability problem. In the Lenovo computer, this problem is addressed with special nylon-coated screws that have the following characteristics:

- They maintain tight connections.
- They do not easily come loose, even with shock or vibration.
- They are harder to tighten.
- Carefully remove screws for reuse when replacing FRUs.

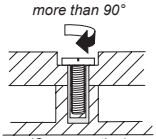
Do the following when you service this machine:

- Keep the screw kit in your tool bag.
- Use a torque screwdriver if you have one.

Tighten screws as follows:

- **Plastic to plastic**

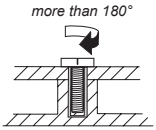
  Turn an additional 90° after the screw head touches the surface of the plastic part:



(Cross-section)

- **Logic card to plastic**

  Turn an additional 180° after the screw head touches the surface of the logic card:



(Cross-section)

- **Torque driver**

  If you have a torque screwdriver , refer to the “Torque” column for each step.
- Make sure that you use the correct screws. If you have a torque screwdriver, tighten all screws firmly to the torque shown in the table. **Carefully remove screws for reuse when replacing FRUs. Make sure that all screws are tightened firmly.**
- Ensure torque screwdrivers are calibrated correctly following country specifications.

Removing and replacing an FRU

This section presents exploded figures with the instructions to indicate how to remove and replace the FRU. Make sure to observe the following general rules:

1. Do not attempt to service any computer unless you have been trained and certified. An untrained person runs the risk of damaging parts.
2. Before replacing any FRU, review “FRU replacement notices” on page 31.
3. Begin by removing any FRUs that have to be removed before the failing FRU. Any of such FRUs are listed at the top of the page. Remove them in the order in which they are listed.
4. Follow the correct sequence in the steps to remove the FRU, as given in the figures by the numbers in square callouts.
5. When turning a screw to replace an FRU, turn it in the direction as given by the arrow in the figure.
6. When removing the FRU, move it in the direction as given by the arrow in the figure.
7. To put the new FRU in place, reverse the removal procedures and follow any of the notes that pertain to replacement. For information about connecting and arranging internal cables, see “Locations” on page 81.
8. When replacing an FRU, use the correct screw as shown in the procedures.

⚠ DANGER

Before removing any FRU, turn off the computer, unplug all power cords from electrical outlets, and then disconnect any of the interconnecting cables.

Attention: After replacing an FRU, do not turn on the computer until you have made sure that all screws, springs, and other small parts are in place and none are loose inside the computer. Verify this by shaking the computer gently and listening for rattling sounds. Metallic parts or metal flakes can cause electrical short circuits.

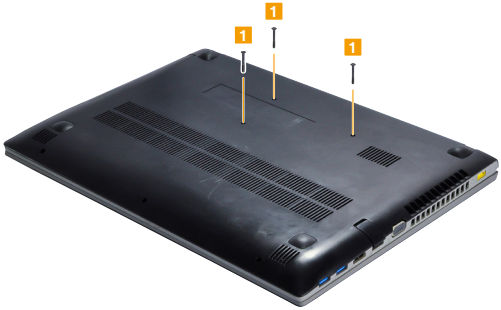
Attention: The system board is sensitive to, and can be damaged by, electrostatic discharge. Before touching it, establish personal grounding by touching a ground point with one hand or using an electrostatic discharge (ESD) strap (P/N 6405959) to remove potential shock reasons.

1010 Keyboard

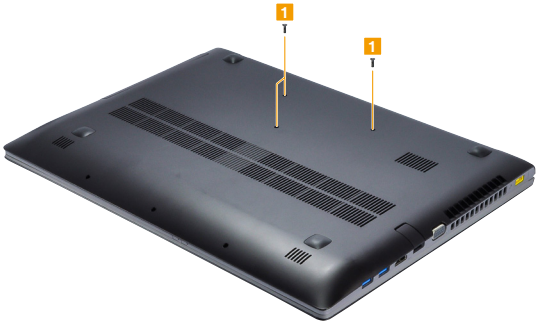
Figure 1. Removal steps of keyboard

Remove the screws ■.

Z410



Z510/Z510 Touch



Step	Screw (quantity)	Color	Torque
■	M2 × 12 mm, flat-head, nylok-coated (3) (Z410) Logic Lower to K/B	Black	1.85+/-0.15 kgf/cm
■	M2 × 4.9 mm, flat-head, nylok-coated (3) (Z510/Z510 Touch) Logic Lower to K/B	Black	1.85+/-0.15 kgf/cm

Figure 1. Removal steps of keyboard (continued)

Insert the screwdriver into one of the screw hole on the bottom 2. Then pull the keyboard out of the keyboard bezel 3.

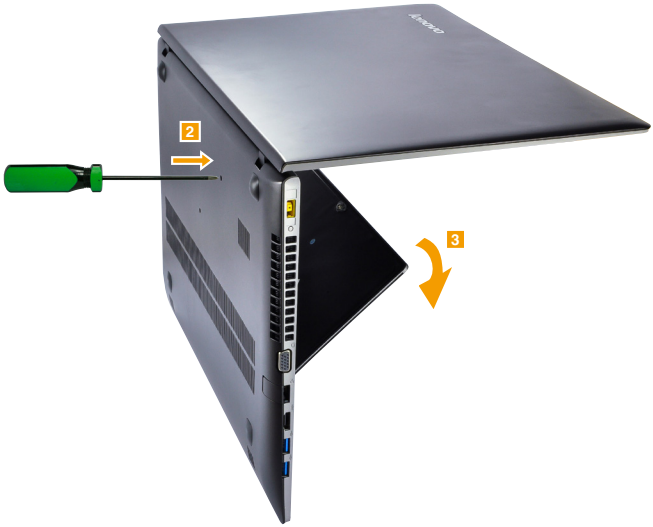


Figure 1. Removal steps of keyboard (continued)

Lift the keyboard a little, and then detach the connectors in the direction shown by arrows 4 5. Remove the keyboard in the direction shown by arrow 6.

Z410

Figure 1. Removal steps of keyboard (continued)

Z510/Z510 Touch

When installing: Make sure that the FPC connector is attached firmly.

1020 Optical drive

For access, remove this FRU:

- “1010 Keyboard” on page 33

Figure 2. Removal steps of optical drive

Remove the screw ■.

Step	Screw (quantity)	Color	Torque
■	M2.5 × 6 mm, flat-head, nylok-coated (1) Logic Upper to Logic Lower	Black	3.0+/-0.3 kgf/cm

Figure 2. Removal steps of Optical drive (continued)

Insert a screwdriver into the screw hole and push the optical drive in the direction shown by arrow 2. Pull the optical drive out in the direction shown by arrow 3.

1030 Base cover

For access, remove this FRU:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37

Figure 3. Removal steps of base cover

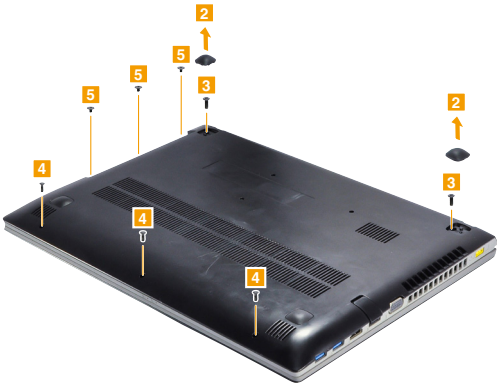
Z410

Remove the screws ■.

Step	Screw (quantity)	Color	Torque
■	M2.5 × 6 mm, flat-head, nylok-coated (4) Logic Upper to Logic Lower	Black	3.0+/-0.3 kgf/cm

Figure 3. Removal steps of base cover (continued)

Remove the two rubber feet 2. Remove the screws 3, 4 and 5 from the bottom.



Step	Screw (quantity)	Color	Torque
3	M2.5 × 6 mm, flat-head, nylok-coated (2) Rubber foot to Logic Upper	Black	3.0+/-0.3 kgf/cm
4	M2 × 4.9 mm, flat-head, nylok-coated (3) Logic Lower to Logic Upper	Black	1.85+/-0.15 kgf/cm
5	M2 × 2.5 mm, flat-head, nylok-coated (3) Logic Lower to Logic Upper	Black	1.85+/-0.15 kgf/cm

Remove the base cover in the direction shown by arrow 6.

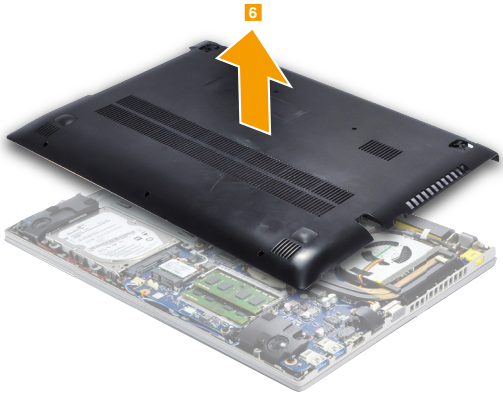


Figure 3. Removal steps of base cover (continued)

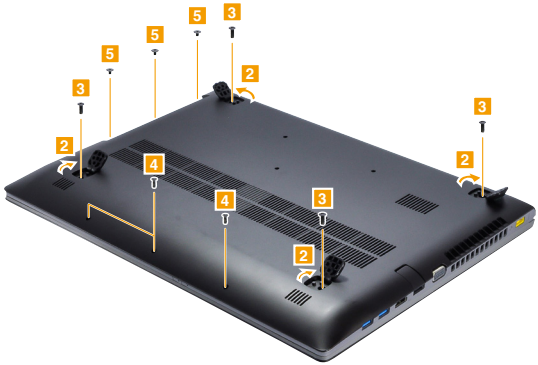
Z510/Z510 Touch

Remove the screws ■.

Step	Screw (quantity)	Color	Torque
■	M2.5 × 6 mm, flat-head, nylok-coated (5) Logic Upper to Logic Lower	Black	3.0+/-0.3 kgf/cm

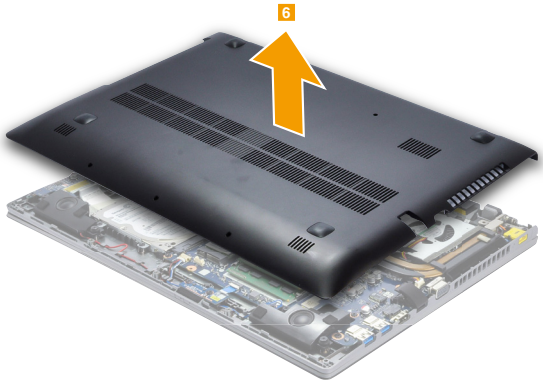
Figure 3. Removal steps of base cover (continued)

Open the four rubber feet 2. Remove the screws 3, 4 and 5 from the bottom.



Step	Screw (quantity)	Color	Torque
3	M2.5 × 6 mm, flat-head, nylok-coated (4) Rubber foot to Logic Upper	Black	3.0+/-0.3 kgf/cm
4	M2 × 4.9 mm, flat-head, nylok-coated (3) Logic Lower to Logic Upper	Black	1.85+/-0.15 kgf/cm
5	M2 × 2.5 mm, flat-head, nylok-coated (3) Logic Lower to Logic Upper	Black	1.85+/-0.15 kgf/cm

Remove the base cover in the direction shown by arrow 6.



Note: Applying labels to the base cover

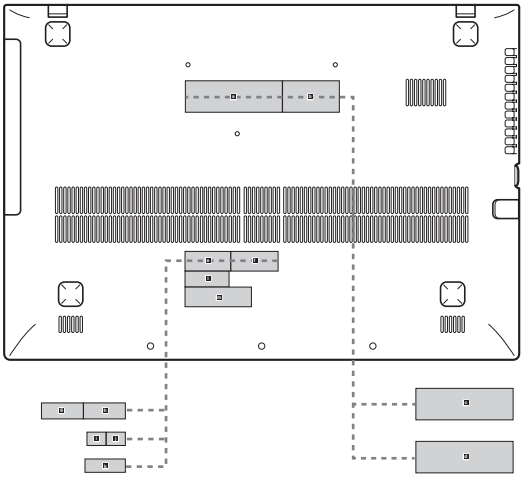
The new base cover FRU is shipped with a kit containing labels of several kinds. When you replace the base cover, you need to apply the following label:

The following labels need to be peeled off from the old base cover, and need to be put on the new base cover.

- a Rating label
- b Rating label
- c Rating label for China
- d Rating label for WW
- e Brazil BT label
- f Brazil WL label
- g BT label for US/CA/TW/INDONESIA
- h WL label for US/CA/TW/INDONESIA
- i SIRIM BT label
- j SIRIM WL label
- k Israel WL label
- l Indonesia D side label
- m KCC label

For some models, you also need to apply one or two FCC labels. Check the old base cover; if it has one or two FCC labels, find duplicates of them in the label kit and apply them to the new base cover.

For the location of each label, refer to the following figure:



1040 Battery pack

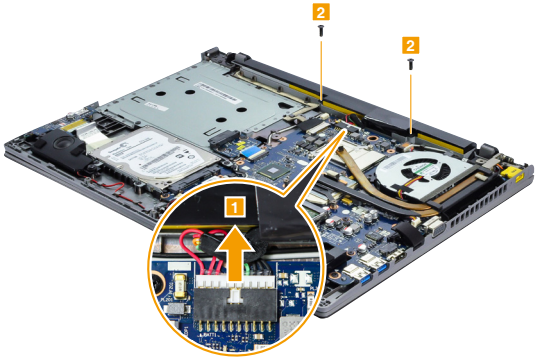
For access, remove these FRUs in order:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39

> ⚠ **DANGER**
>
> Only use the battery specified in the parts list for your computer. Any other battery could ignite or explode.

Figure 4. Removal steps of battery pack

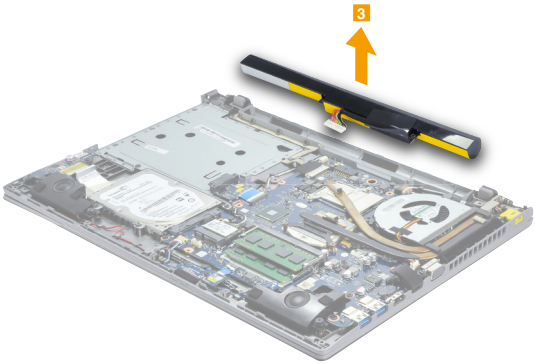
Detach the battery pack connector in the direction shown by arrow ■, remove the screws 2.



Step	Screw (quantity)	Color	Torque
2	M2.5 × 6 mm, flat-head, nylok-coated (2) Logic Upper to Battery	black	3.0+/-0.3 kgf/cm

Figure 4. Removal steps of battery pack (continued)

Remove the battery pack in the direction shown by arrow 3.



When installing: Make sure the battery pack connector is attached firmly.

1050 Hard disk drive

For access, remove these FRUs in order:

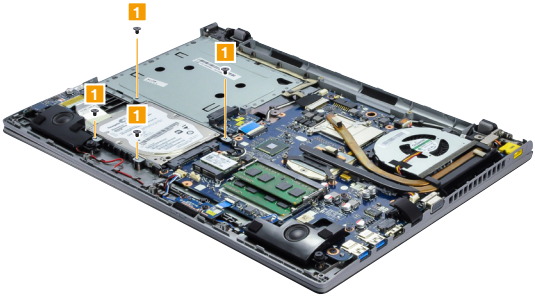
- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44

Attention:

- **Do not drop the hard disk drive or apply any physical shock to it.** The hard disk drive is sensitive to physical shock. Improper handling can cause damages and permanent loss of data.
- Before removing the drive, suggest the customer to backup all the information on it if possible.
- Never remove the drive while the system is operating or is in suspend mode.

Figure 5. Removal steps of hard disk drive

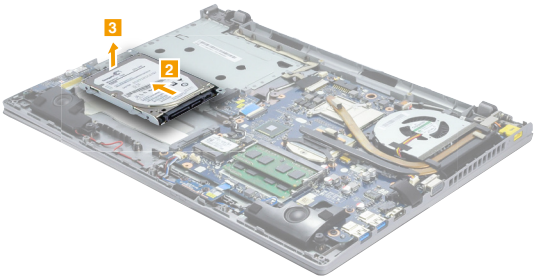
Remove the screws ■.



Step	Screw (quantity)	Color	Torque
■	M2.5 × 3 mm, flat-head, nylok-coated (4) HDD to Logic Upper	Black	3.0+/-0.3 kgf/cm

Figure 5. Removal steps of hard disk drive (continued)

Detach the HDD connector in the direction shown by arrow 2. Remove the hard disk drive from the slot in the direction shown by arrow 3.



When installing: Make sure that the HDD connector is attached firmly.

Remove the screws 4, then take out the metal frame.

Step	Screw (quantity)	Color	Torque
4	M3 × 3 mm, flat-head, nylok-coated (4) HDD_BRK to module	White	3.0+/-0.3 kgf/cm

When installing: Make sure that the HDD connector is attached firmly.

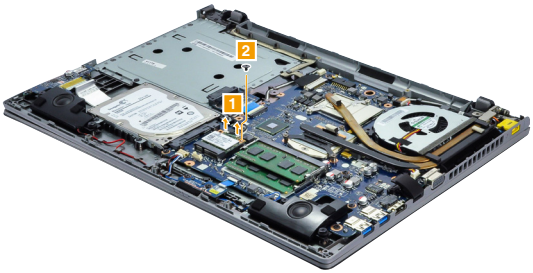
1060 PCI Express Mini Card for wireless LAN

For access, remove these FRUs in order:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44

Figure 6. Removal steps of PCI Express Mini Card for wireless LAN

Disconnect the two wireless LAN cables (black, white) ■, and then remove the screw 2.



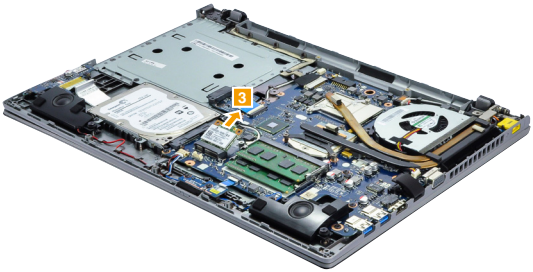
In step ■, unplug the jacks by using the removal tool antenna RF connector (P/N: 08K7159), or pick up the connectors with your fingers and gently unplug them in the direction shown by arrows.

Notes: wireless LAN card has 2 cables in step ■.
wireless LAN card in some models may have 3 cables in step ■.

Step	Screw (quantity)	Color	Torque
2	M2 × 2.5 mm, flat-head, nylok-coated (1) WLAN Card to MB	Black	1.85+/-0.15 kgf/cm

Figure 6. Removal steps of PCI Express Mini Card for wireless LAN (continued)

Remove the card in the direction shown by arrow 3.



When installing:

- In models with a wireless LAN card that has two antenna connectors, plug the black cable (1st) (MAIN) into the jack labeled **1**, and the white cable (2nd) (AUX) into jack labeled **2** on the card.
- In models with a wireless LAN card that has three antenna connectors, plug the black cable (1st) (MAIN) into the jack labeled **1**, the grey cable (3rd) into jack labeled **3**, and the white cable (2nd) (AUX) into jack labeled **2** on the card.

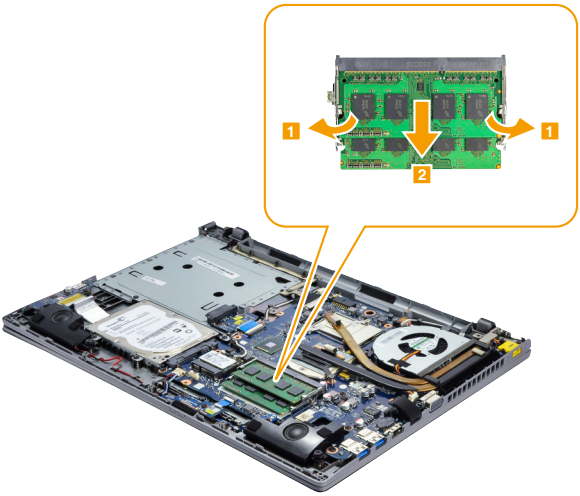
1070 DIMM

For access, remove these FRUs in order:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44

Figure 7. Removal steps of DIMM

Release the two latches on both edges of the socket at the same time in the direction shown by arrows 1, and then unplug the DIMM in the direction shown by arrow 2.



When installing: Insert the notched end of the DIMM into the socket. Push the DIMM firmly, and pivot it until it snaps into the place. Make sure that it is firmly fixed in the slot and difficult to be moved.

1080 Fan assembly and Heat Sink assembly

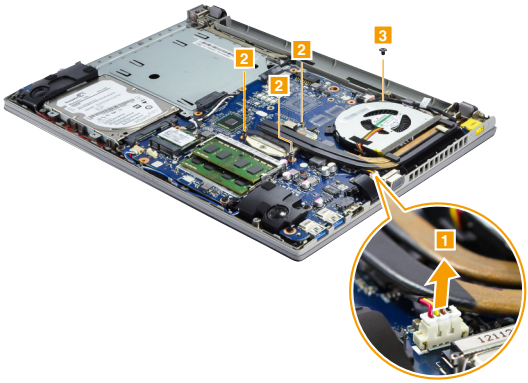
For access, remove these FRUs in order:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44

Figure 8. Removal steps of fan assembly and heat sink assembly

Detach the fan connector in the direction shown by arrow ■ , and then loosen the screws 2 and remove the screw 3.

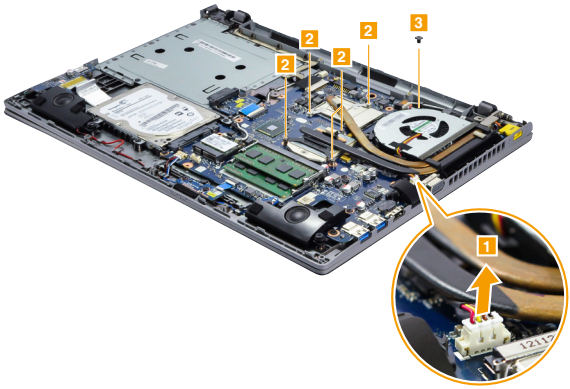
Z410



Step	Screw (quantity)	Color	Torque
3	M2 × 3, flat-head, nylok-coated (1) FAN to Logic Upper	Black	1.85+/-0.15 kgf/cm

Figure 8. Removal steps of fan assembly and heat sink assembly (continued)

Z510/Z510 Touch



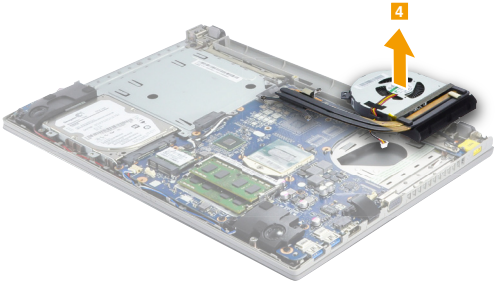
Step	Screw (quantity)	Color	Torque
3	M2 × 3.2, flat-head, nylok-coated (1) FAN to Logic Upper	Black	1.85+/-0.15 kgf/cm

When installing: Make sure that the fan connector is attached firmly to the system board.

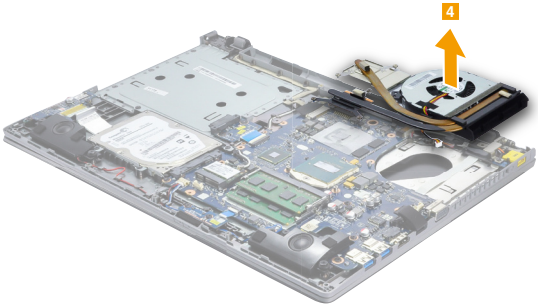
Figure 8. Removal steps of fan assembly and heat sink assembly (continued)

Lift the fan assembly and heat sink assembly in the direction shown by arrow 4. Be careful not to damage the connector.

Z410



Z510/Z510 Touch



Attention: Do not handle the heat sink assembly roughly. Improper handling can cause distortion or deformation and imperfect contact with components.

1090 CPU

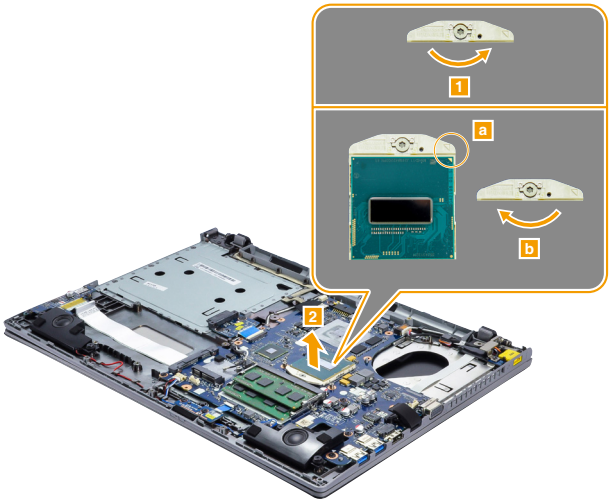
For access, remove these FRUs in order:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44
- “1050 Hard disk drive” on page 46
- “1060 PCI Express Mini Card for wireless LAN” on page 48
- “1080 Fan assembly and Heat Sink assembly” on page 51

Attention: CPU is extremely sensitive. When you service the CPU, avoid any kind of rough handling.

Figure 9. Removal steps of CPU

Rotate the head of the screw in the direction shown by arrow 1 to release the lock, then remove the CPU in the direction shown by arrow 2.



When installing: Place the CPU on the CPU socket in the direction shown by arrow a, and then rotate the head of the screw in the direction shown by arrow b to secure the CPU.

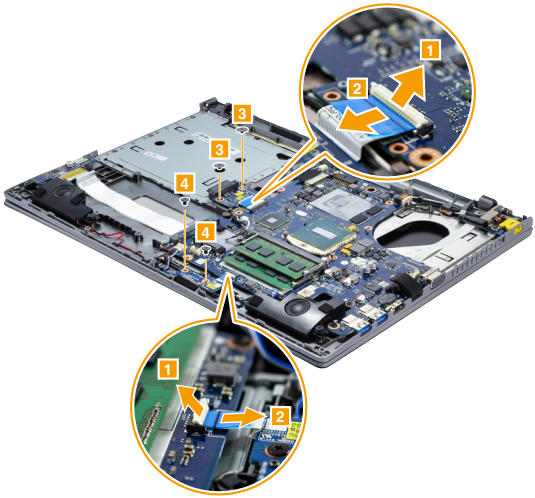
1100 ODD board and LED board (Z510/Z510 Touch)

For access, remove these FRUs in order:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44
- “1050 Hard disk drive” on page 46
- “1060 PCI Express Mini Card for wireless LAN” on page 48
- “1080 Fan assembly and Heat Sink assembly” on page 51

Figure 10. Removal steps of ODD board and LED board (Z510/Z510 Touch)

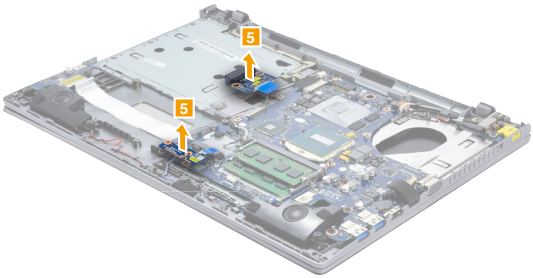
Detach the two FPC connectors in the direction shown by arrows ■ 2. Remove the screws 3 and 4.



Step	Screw (quantity)	Color	Torque
3	M2 × 2.5, flat-head, nylok-coated (2)	Black	1.85+/-0.15 kgf/cm
4	M2 × 3, flat-head, nylok-coated (2)	Black	1.85+/-0.15 kgf/cm

Figure 10. Removal steps of ODD board and LED board (Z510/Z510 Touch) (continued)

Remove the two boards in the direction shown by arrows 5.



When installing: Make sure that the two FPC connectors are attached firmly.

1110 Speakers

For access, remove these FRUs in order:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44
- “1050 Hard disk drive” on page 46
- “1060 PCI Express Mini Card for wireless LAN” on page 48
- “1080 Fan assembly and Heat Sink assembly” on page 51
- “1100 ODD board and LED board (Z510/Z510 Touch)” on page 55

Figure 11. Removal steps of speakers

Detach the speakers connector in the direction shown by arrow ■. Remove the screws 2.

Z410

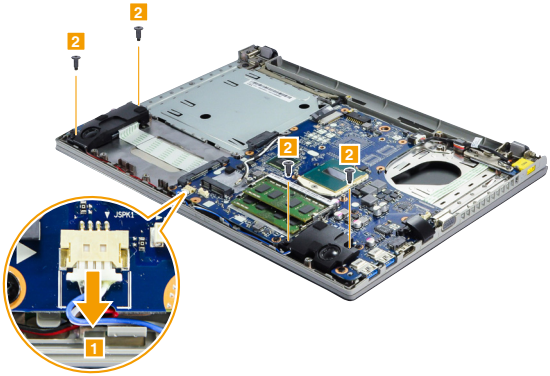
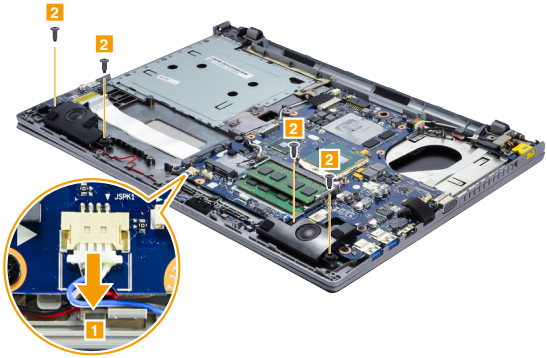


Figure 11. Removal steps of speakers (continued)

Z510/Z510 Touch

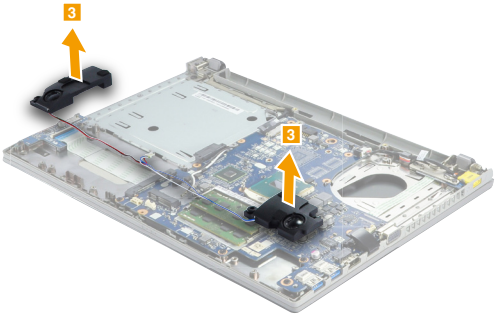


Step	Screw (quantity)	Color	Torque
2	M2 × 5.7+2, flat-head, nylok-coated (4) Speaker to Logic Upper	Black	1.85+/-0.15 kgf/cm

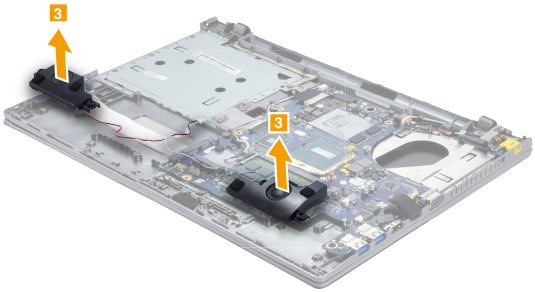
Figure 11. Removal steps of speakers (continued)

Remove the speakers 3.

Z410



Z510/Z510 Touch



When installing: Make sure that the speakers connector is attached firmly.

1120 System board

Important notices for handling the system board:

When handling the system board, bear the following in mind.

- Be careful not to drop the system board on a bench top that has a hard surface, such as metal, wood, or composite.
- Avoid rough handling of any kind.
- In the whole process, make sure not to drop or stack the system board.
- If you put a system board down, make sure to put it only on a padded surface such as an ESD mat or conductive corrugated material.

For access, remove these FRUs in order:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44
- “1050 Hard disk drive” on page 46
- “1060 PCI Express Mini Card for wireless LAN” on page 48
- “1080 Fan assembly and Heat Sink assembly” on page 51
- “1100 ODD board and LED board (Z510/Z510 Touch)” on page 55
- “1110 Speakers” on page 57

Figure 12. Removal steps of system board

Detach the three FPC connectors in the direction shown by arrows ■ 2.

Z410

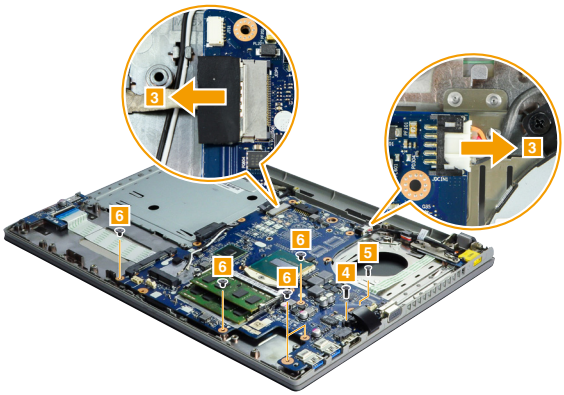
Figure 12. Removal steps of system board (continued)

Z510/Z510 Touch

Figure 12. Removal steps of system board (continued)

Detach the connectors in the direction shown by arrows 3. Remove the screws 4, 5 and 6.

Z410



Z510

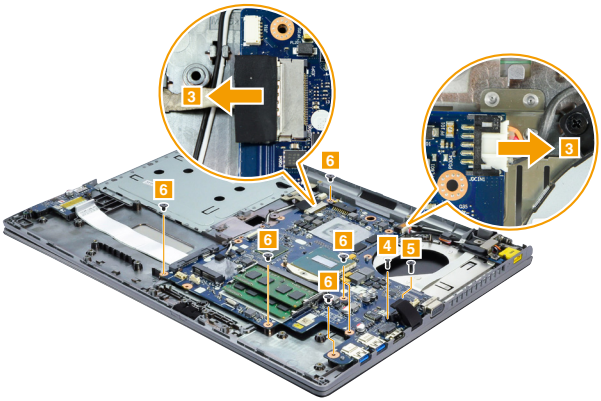
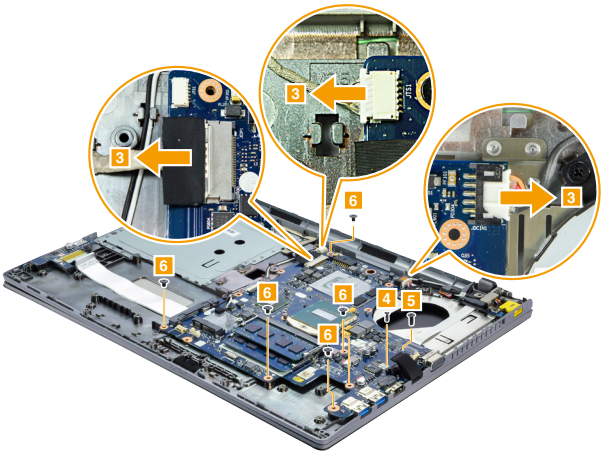


Figure 12. Removal steps of system board (continued)

Z510 Touch

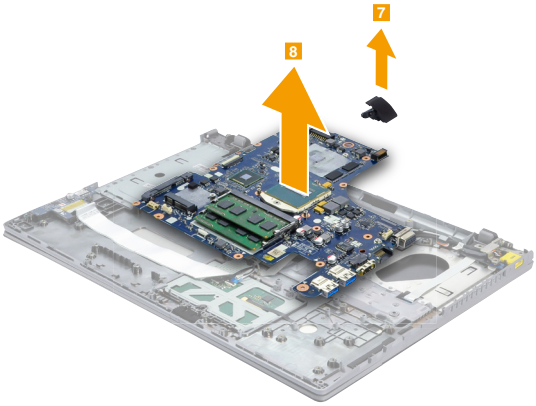


Step	Screw (quantity)	Color	Torque
4	M2.5 × 6 mm, flat-head, nylok-coated (1) (Z410) RJ45 Cover to MB	Black	3.0+/-0.3 kgf/cm
4	M2.0 × 4.9 mm, flat-head, nylok-coated (1) (Z510/Z510 Touch) RJ45 Cover to MB	Black	1.85+/-0.15 kgf/cm
5	M2.0 × 4.9 mm, flat-head, nylok-coated (1) (Z410) RJ45 Cover to Logic Upper	Black	1.85+/-0.15 kgf/cm
5	M2.5 × 6 mm, flat-head, nylok-coated (1) (Z510/Z510 Touch) RJ45 Cover to Logic Upper	Black	3.0+/-0.3 kgf/cm
6	M2.5 × 3 mm, flat-head, nylok-coated (4) (Z410) MB to Logic Upper	Black	3.0+/-0.3 kgf/cm
6	M2.5 × 3 mm, flat-head, nylok-coated (5) (Z510/Z510 Touch) MB to Logic Upper	Black	3.0+/-0.3 kgf/cm

When installing: Make sure that the connectors are attached firmly.

Figure 12. Removal steps of system board (continued)

Remove the RJ-45 door in the direction shown by arrow 7. Remove the system board in the direction shown by arrow 8.



1130 LCD unit

For access, remove these FRUs in order:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44
- “1050 Hard disk drive” on page 46
- “1060 PCI Express Mini Card for wireless LAN” on page 48
- “1070 DIMM” on page 50
- “1080 Fan assembly and Heat Sink assembly” on page 51
- “1100 ODD board and LED board (Z510/Z510 Touch)” on page 55
- “1110 Speakers” on page 57
- “1120 System board” on page 60

Figure 13. Removal steps of LCD unit

Z410

Remove the screws ■ and ■′.

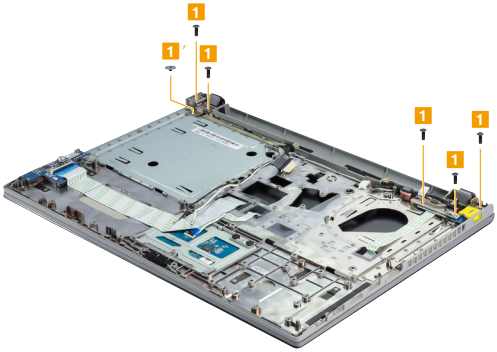
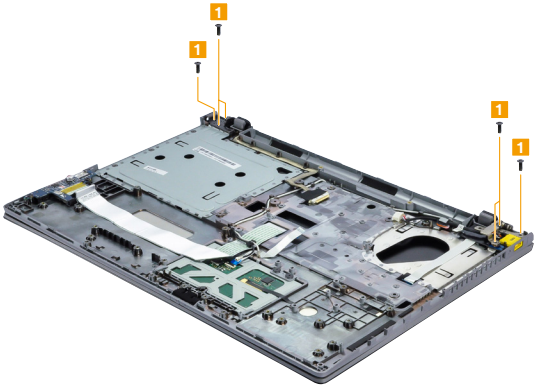


Figure 13. Removal steps of LCD unit (continued)

Z510/Z510 Touch

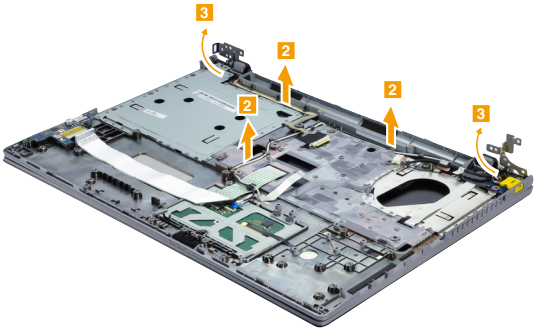
Remove the screws ■.



Step	Screw (quantity)	Color	Torque
■	M2.5 × 6 mm, flat-head, nylok-coated (5) (Z410) LCD Ass'y to Logic Upper	Black	3.0+/-0.3 kgf/cm
■	M2.5 × 6 mm, flat-head, nylok-coated (6) (Z510/Z510 Touch) LCD Ass'y to Logic Upper	Black	3.0+/-0.3 kgf/cm
■′	M2 × 2 mm, flat-head, nylok-coated (1) (Z410) LCD Ass'y to Logic Upper	Black	1.85+/-0.15 kgf/cm

Figure 13. Removal steps of LCD unit (continued)

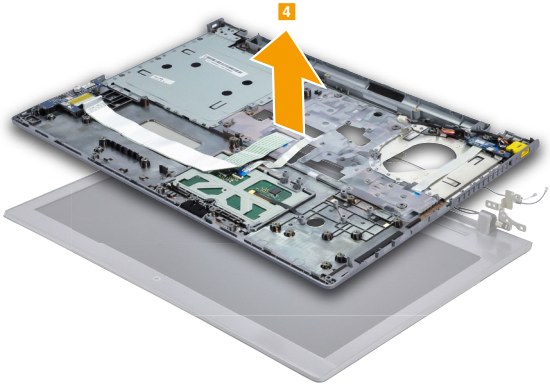
Release the LCD cable from the cable guides in the direction shown by arrows 2. Then lift the LCD hinge in the direction shown by arrow 3.



When installing:

- Route the antenna cables along the cable guides. As you route the cables, make sure that they are not subjected to any tension. Tension could cause the cables to be damaged by the cable guides, or a wire to be broken.
- Make sure that the LCD connector is attached firmly and make sure that you do not pinch the antenna cables when you attach the LCD assembly. Route the LCD cable along the cable guides.

Remove the keyboard bezel from the LCD unit in the direction shown by arrows 5.



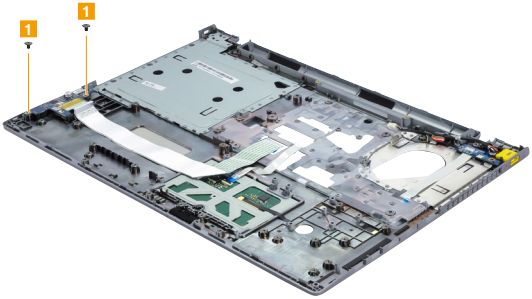
1140 Keyboard bezel

For access, remove these FRUs in order:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44
- “1050 Hard disk drive” on page 46
- “1060 PCI Express Mini Card for wireless LAN” on page 48
- “1070 DIMM” on page 50
- “1080 Fan assembly and Heat Sink assembly” on page 51
- “1100 ODD board and LED board (Z510/Z510 Touch)” on page 55
- “1110 Speakers” on page 57
- “1120 System board” on page 60
- “1130 LCD unit” on page 65

Figure 14. Removal steps of keyboard bezel

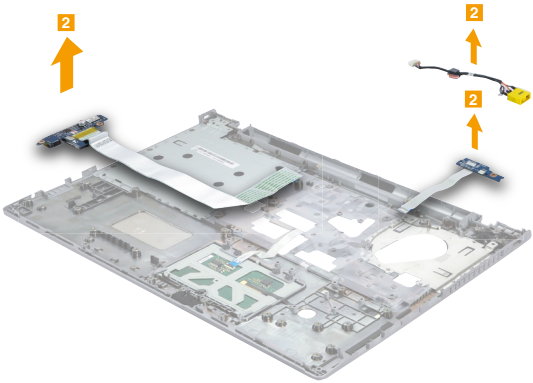
Remove the screws ■.



Step	Screw (quantity)	Color	Torque
■	M2.5 × 3 mm, flat-head, nylok-coated (2) USB Board to Logic Upper	Black	3.0+/-0.3 kgf/cm

Figure 14. Removal steps of keyboard bezel (continued)

Remove the power board, USB board and DC-in jack in the direction shown by arrows 2.



1150 LCD front bezel/LCD hinge cover

For access, remove these FRUs in order:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44
- “1050 Hard disk drive” on page 46
- “1060 PCI Express Mini Card for wireless LAN” on page 48
- “1070 DIMM” on page 50
- “1080 Fan assembly and Heat Sink assembly” on page 51
- “1100 ODD board and LED board (Z510/Z510 Touch)” on page 55
- “1110 Speakers” on page 57
- “1120 System board” on page 60
- “1130 LCD unit” on page 65
- “1140 Keyboard bezel” on page 68

Figure 15. Removal steps of LCD front bezel/LCD hinge cover

Z410/Z510

Remove the LCD front bezel in the direction shown by arrows ■.

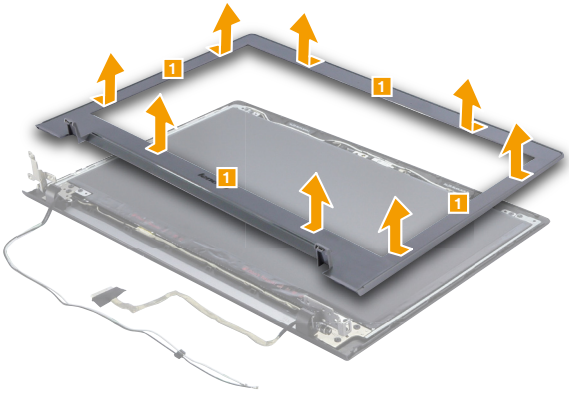
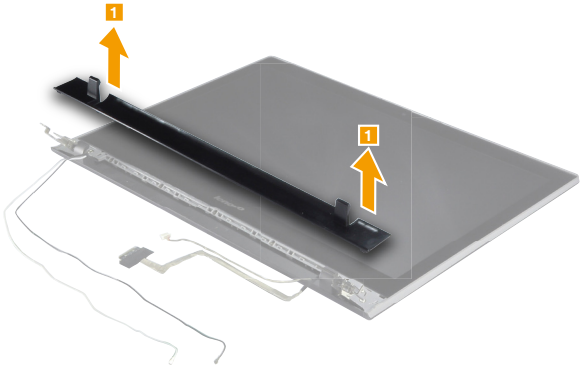


Figure 15. Removal steps of LCD front bezel/LCD hinge cover (continued)

Z510 Touch

Remove the LCD front bezel in the direction shown by arrows ■.



1160 LCD panel/LCD module

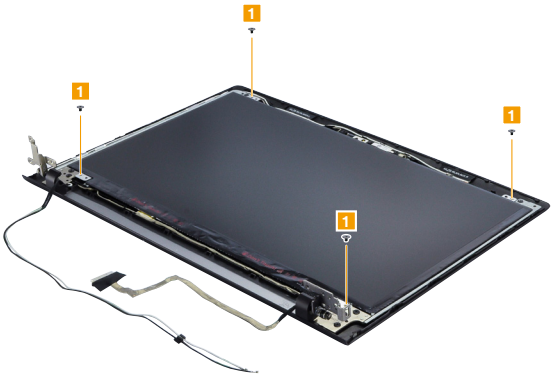
For access, remove these FRUs in order:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44
- “1050 Hard disk drive” on page 46
- “1060 PCI Express Mini Card for wireless LAN” on page 48
- “1070 DIMM” on page 50
- “1080 Fan assembly and Heat Sink assembly” on page 51
- “1100 ODD board and LED board (Z510/Z510 Touch)” on page 55
- “1110 Speakers” on page 57
- “1120 System board” on page 60
- “1130 LCD unit” on page 65
- “1140 Keyboard bezel” on page 68
- “1150 LCD front bezel/LCD hinge cover” on page 70

Figure 16. Removal steps of LCD panel/LCD module

Z410/Z510

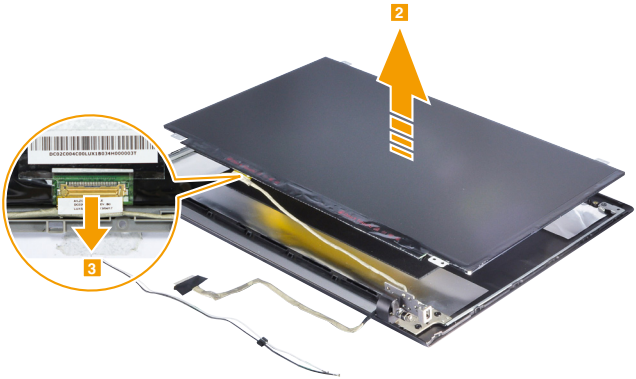
Remove the screws ■.



Step	Screw (quantity)	Color	Torque
■	M2 × 2.5 mm, flat-head, nylok-coated (4) LCD_PANEL to LCD COVER	Black	1.85+/-0.15 kgf/cm

Figure 16. Removal steps of LCD panel/LCD module (continued)

Lift the LCD panel a little 2. Peel off the adhesive tape and detach the connector in the direction shown by arrow 3.



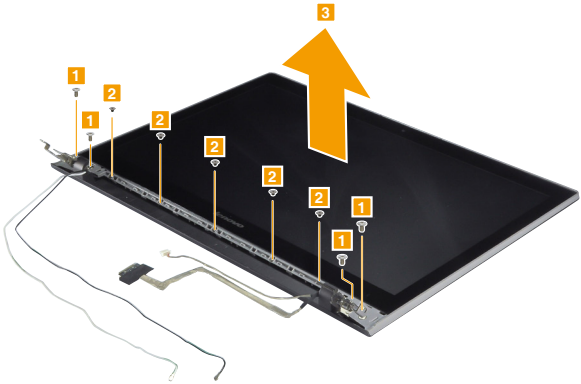
When installing: Make sure that the metal connector is attached firmly.

Remove the LCD panel 4.

Figure 16. Removal steps of LCD panel/LCD module (continued)

Z510 Touch

Remove the screws ■ and 2, then remove the LCDl module 3.



Step	Screw (quantity)	Color	Torque
■	M2 × 2.5 mm, flat-head, nylok-coated (4) LCD_PANEL to LCD COVER	White	1.85+/-0.15 kgf/cm
2	M2.5 × 5 mm, flat-head, nylok-coated (5) LCD_PANEL to LCD COVER	Black	3.0+/-0.3 kgf/cm

1170 LCD Hinges

For access, remove these FRUs in order:

- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44
- “1050 Hard disk drive” on page 46
- “1060 PCI Express Mini Card for wireless LAN” on page 48
- “1070 DIMM” on page 50
- “1080 Fan assembly and Heat Sink assembly” on page 51
- “1100 ODD board and LED board (Z510/Z510 Touch)” on page 55
- “1110 Speakers” on page 57
- “1120 System board” on page 60
- “1130 LCD unit” on page 65
- “1140 Keyboard bezel” on page 68
- “1150 LCD front bezel/LCD hinge cover” on page 70
- “1160 LCD panel/LCD module” on page 72

Figure 17. Removal steps of LCD hinges

Z410

Remove the screws 1 and 2. Then release the two hinges in the direction shown by arrows 3.

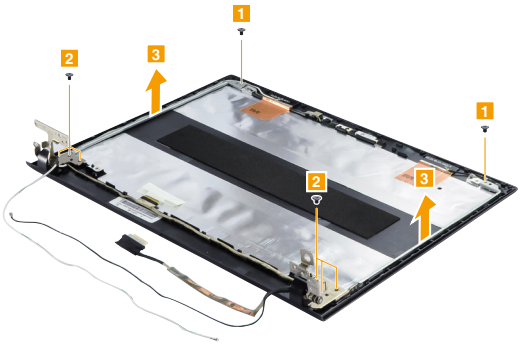
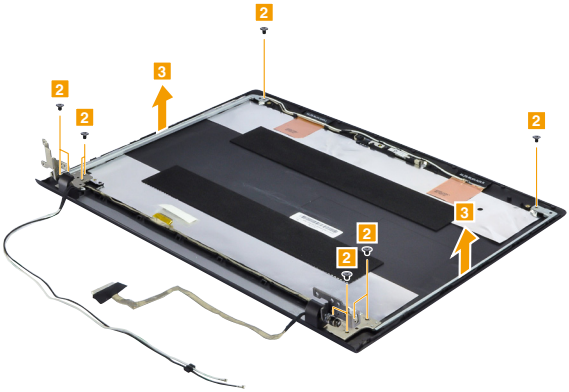


Figure 17. Removal steps of LCD hinges (continued)

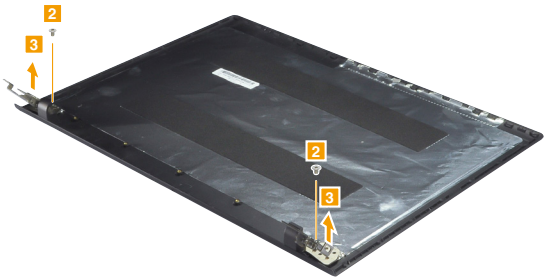
Z510

Remove the screws 2. Then release the two hinges in the direction shown by arrows 3.



Z510 Touch

Remove the screws 2. Then release the two hinges in the direction shown by arrows 3.



Step	Screw (quantity)	Color	Torque
■	M2 × 2.5 mm, flat-head, nylok-coated (2) (Z410) Hinge L/R to LCD Cover	Black	1.85+/-0.15 kgf/cm
2	M2.5 × 3 mm, flat-head, nylok-coated (6) (Z410) Hinge L/R to LCD Cover	Black	3.0+/-0.3 kgf/cm
2	M2 × 3 mm, flat-head, nylok-coated (10) (Z510) Hinge L/R to LCD Cover	Black	1.85+/-0.15 kgf/cm
2	M2.5 × 3 mm, flat-head, nylok-coated (2) (Z510 Touch) Hinge L/R to LCD Cover	White	3.0+/-0.3 kgf/cm

1180 Integrated camera, LCD cable and antenna assembly

For access, remove these FRUs in order:

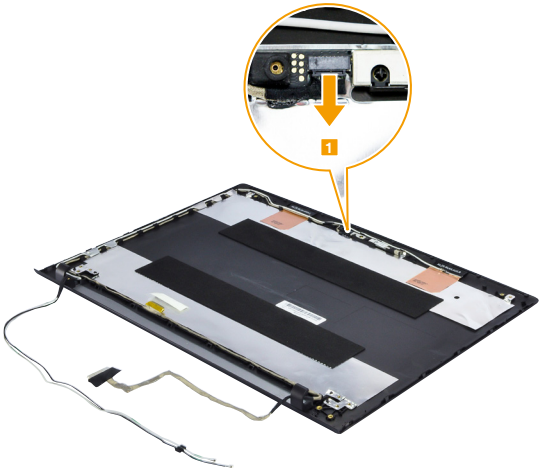
- “1010 Keyboard” on page 33
- “1020 Optical drive” on page 37
- “1030 Base cover” on page 39
- “1040 Battery pack” on page 44
- “1050 Hard disk drive” on page 46
- “1060 PCI Express Mini Card for wireless LAN” on page 48
- “1070 DIMM” on page 50
- “1080 Fan assembly and Heat Sink assembly” on page 51
- “1100 ODD board and LED board (Z510/Z510 Touch)” on page 55
- “1110 Speakers” on page 57
- “1120 System board” on page 60
- “1130 LCD unit” on page 65
- “1140 Keyboard bezel” on page 68
- “1150 LCD front bezel/LCD hinge cover” on page 70
- “1160 LCD panel/LCD module” on page 72
- “1170 LCD Hinges” on page 75

Figure 18. Removal steps of integrated camera, LCD cable and antenna assembly

Z410/Z510

Note: The integrated camera is stuck on the top center of the LCD cover.

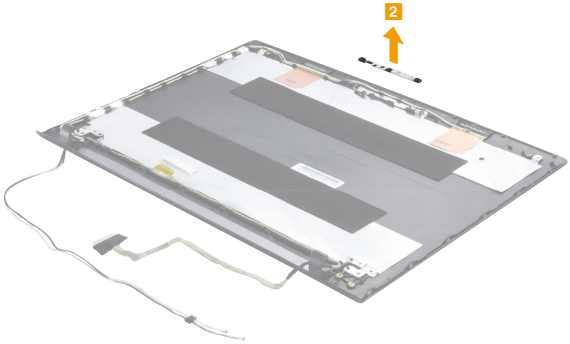
Detach the integrated camera connector in the direction shown by arow ■.



When installing: Stick the integrated camera to the top center of the LCD cover and ajust the placement of it to make sure the connector is attached firmly.

Figure 18. Removal steps of integrated camera, LCD cable and antenna assembly (continued)

Remove the camera in the direction shown by arrow 2.



Remove the LCD cable and antenna assembly in the direction shown by arrows 3.

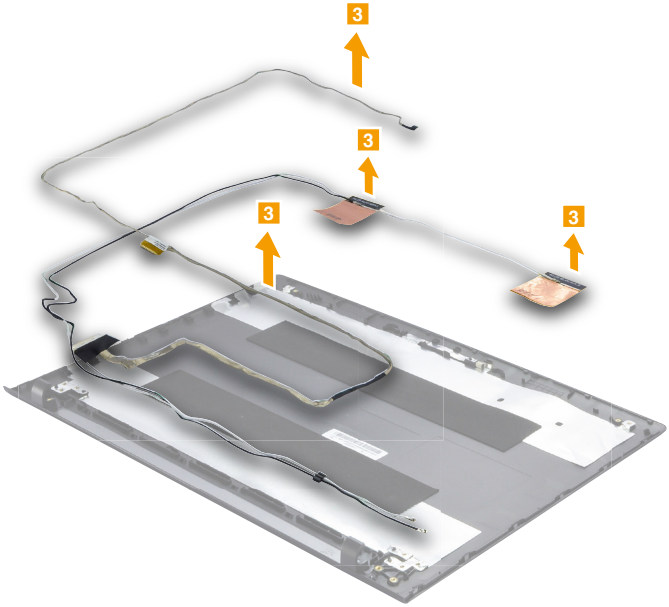
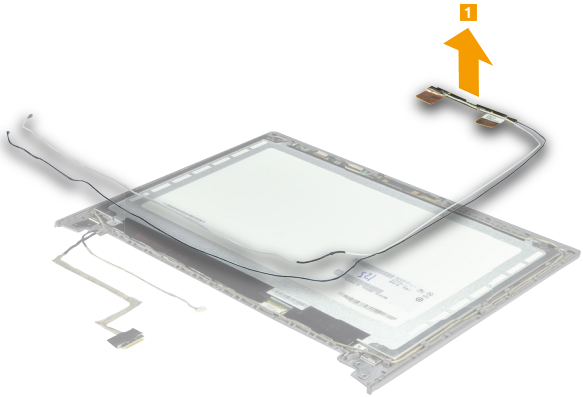


Figure 18. Removal steps of integrated camera, LCD cable and antenna assembly (continued)

Z510 Touch

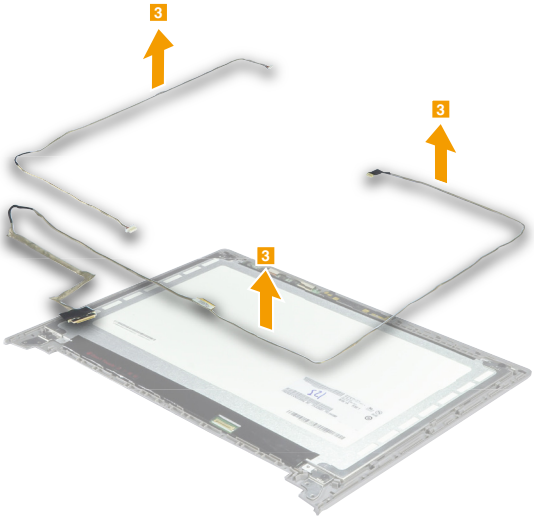
Remove the antenna assembly in the direction shown by arrow ■.



Detach the connectors in the direction shown by arows ■.

Figure 18. Removal steps of integrated camera, LCD cable and antenna assembly (continued)

Remove the camera cable and LCD cable in the direction shown by arrows 3.



Remove the camera in the direction shown by arrow 4.

Locations

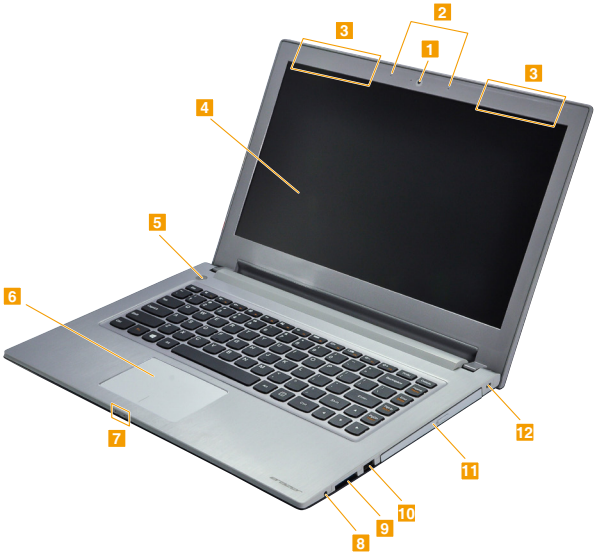
Front view and right-side view

1 Integrated camera
2 Built-in microphone
3 Wireless LAN antennas
4 Computer display
5 Power button
6 Touchpad
7 System status indicators

Note: For the description of each indicator, see “Status indicators” on page 28.

8 Combo audio jack
9 Memory card slot
10 USB port
11 Optical drive
12 Kensington slot

Z410

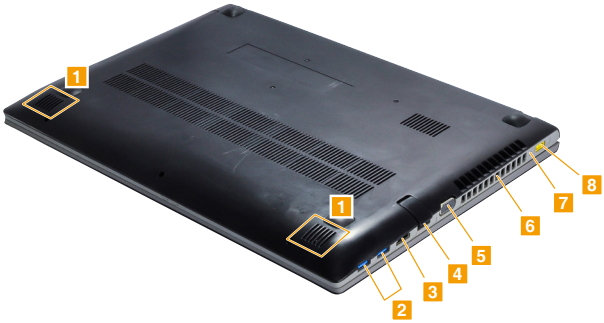


Z510/Z510 Touch

Bottom and Left-side view

1. Speakers
2. USB port
3. HDMI port
4. RJ-45 port
5. VGA port
6. Fan louvers
7. Novo button
8. AC power adapter jack

Z410



Z510/Z510 Touch

Parts list

This section presents the following service parts:

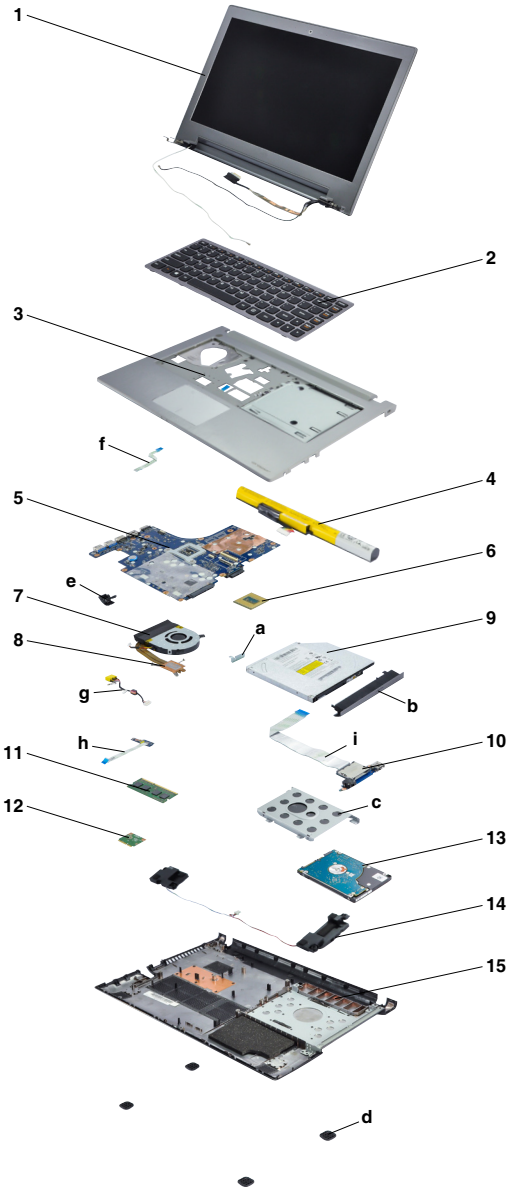
- “Overall” on page 85
- “LCD FRUs” on page 93
- “Keyboard” on page 98
- “Miscellaneous parts” on page 104
- “AC adapters” on page 105
- “Screws” on page 105
- “Power cords” on page 106

Notes:

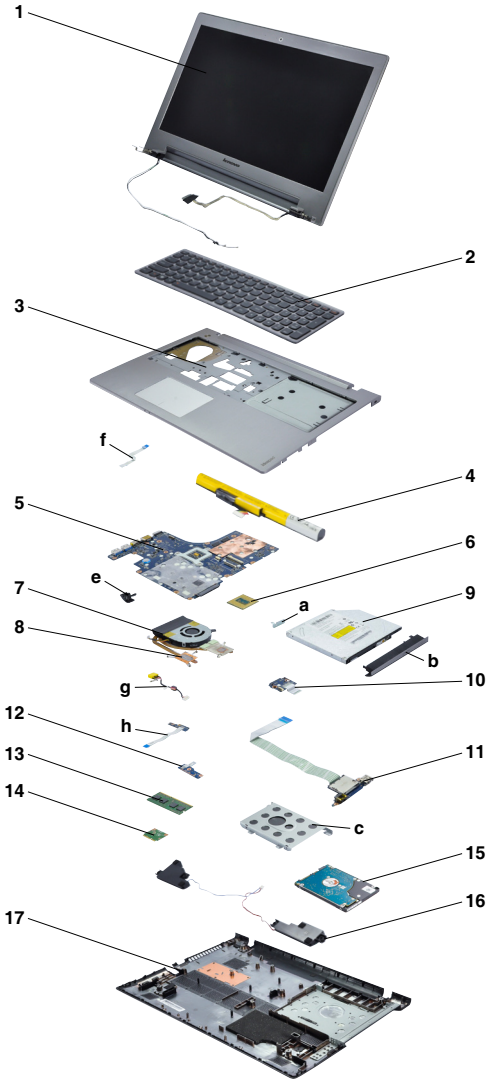
- Each FRU is available for all types or models, unless specific types or models are specified.

Overall

Z410



Z510/Z510 Touch



Z410

Table 5. Parts list—Overall (Z410)

No.	FRU	FRU no.	CRU ID.
a-i	See “Miscellaneous parts” on page 104.		
1	LCD unit (see “LCD FRUs” on page 93.)		
2	Keyboard (see “Keyboard” on page 98.)		
3	AILZA Upper Case	90203969	N
3	AILZA Upper Case for Erazer	90203970	
4	Battery, 4S1P, 4cell,48Wh, Sanyo, Z400Z500 SY L12S4K01 14.4V48Wh 4cellbty	121500113	
4	Battery, 4S1P, 4cell,48Wh, Simplo, Zx10 SP/S L12M4F02 15V48Wh 4cellbty	121500202	
4	Battery, 4S1P, 4cell, 41.6Wh, Sanyo, Zx0 SY L12S4E21 14.4V41.6Wh 4cellbty	121500121	
4	Battery, 4S1P, 4cell, 41.6Wh,Simplo, Zx0 SP/L L12M4E21 14.8V41.6Wh 4cellbty	121500123	
5	AILZA MB UMA 37W	90004453	
5	AILZA MB UMA 47W	90004454	
5	AILZA MB N14P-GV2 1G	90004455	
5	AILZA MB N14P-GV2 2G	90004456	
5	AILZA MB W8S UMA 37W	90004457	
5	AILZA MB W8S UMA 47W	90004458	
5	AILZA MB W8S N14P-GV2 1G	90004459	
5	AILZA MB W8S N14P-GV2 2G	90004460	
5	AILZA MB W8P UMA 37W	90004461	
5	AILZA MB W8P UMA 47W	90004462	
5	AILZA MB W8P N14P-GV2 1G	90004463	
5	AILZA MB W8P N14P-GV2 2G	90004464	
6	Processor, Intel Haswell platform 35w, Intel I7-4702MQ 2.2G 4cPGA CPU	102500541	
6	Processor, Intel Haswell platform 35w, Intel I7-4700MQ 2.4G 4cPGA CPU	102500540	
7	AILZA FAN	90203964	
8	AILZA Thermal DIS 37W	90203961	
8	AILZA Thermal UMA 37W	90203962	
8	AILZA Thermal UMA 37W	90203963	
9	ODD, 9.5 Rambo Tray-in, HLDS GU70N 9.5 Rambo ODD	25205807	
9	ODD, 9.5 Rambo Tray-in, PLDS DU-8A5SH 9.5 Rambo ODD	25205806	
9	ODD, 9.5 Rambo Tray-in, PSN UJ8DB Slim Tray Rambo w/o bezel	25212030	
9	ODD, 9.5 HLDS BU10N 9.5 BD Rambo ODD	25209260	
9	ODD, 9.5 Panasonic UJ262 9.5 BD Rambo ODD	25209259	
10	AILZA USB&Audio Board	90004452	

Table 5. Parts list—Overall (Z410) (continued)

No.	FRU	FRU no.	CRU ID.
11	RAM, DDR3 1600 2GB, Samsung, M471B5773DH0-YK0 2GB DDR3L 1600	11200502	N
11	RAM, DDR3 1600 2GB, SK hynix, HMT425S6AFR6A-PB 2GB DDR3L 1600	11201299	
11	RAM, DDR3 1600 2GB, Ramaxel, RMT3170ED58F8W-1600	11201835	
11	RAM, DDR3 1600 2GB, Micron, MT4KTF25664HZ-1G6E1 2GB DDR3L 1600	11201967	
11	RAM, DDR3L 1600 4GB, Samsung, M471B5173BH0-YK0 4GB DDR3L 1600	11201966	
11	RAM, DDR3L 1600 4GB, SK hynix, HMT451S6AFR8A-PB 4GB DDR3L 1600	11201300	
11	RAM, DDR3L 1600 4GB, Ramaxel, RMT3170EB68F9W-1600 4GB DDR3L 1600	11201512	
11	RAM, DDR3L 1600 4GB, Sharetronic, SM321NQ08ICF 4GB DDR3L 1600	11201834	
11	RAM, DDR3L 1600 4GB, Micron, MT8KTF51264HZ-1G6J1 4GB DDR3L 1600	11201342	
11	RAM, DDR3L 1600 8GB, Samsung, M471B1G73BH0-YK0 8GB DDR3L 1600	11200504	
11	RAM, DDR3L 1600 8GB, SK hynix, HMT41GS6AFR8A-PB 8GB DDR3L 1600	11201301	
11	RAM, DDR3L 1600 8GB, Sharetronic, SM322NW08IAF 8GB DDR3L 1600	11201514	
11	RAM, DDR3L 1600 8GB, Micron, MT16KTF1G64HZ-1G6E1 8GB DDR3L 1600	11201304	
12	WLAN, Intel 7260BN 2x2BN+BT PCIE HMC WLAN	20200412	
12	WLAN, Cbt BCM94313HMG 1x1BGN HMC	20200102	
12	WLAN, Liteon HB125 1x1BGN HMC	20200223	
12	WLAN, Cbt BCM943142HM 1x1BGN+BT4.0 HMC	20200222	
12	WLAN, Liteon WB225 1x1BGN+BT4.0 HMC	20200224	
12	WLAN, Liteon WB335 1x1BGN+BT4.0 HMC	20200437	
13	Hard disk drive, ST500LM012 6G 9.5mm 5.4K 500G HDD	16200387	
13	Hard disk drive, ST500LT012 6G 7mm 5.4K 500G HDD	16200383	
13	Hard disk drive, HTS545050A7E660 6G 7mm 5.4K 500G HDD	16200404	
13	Hard disk drive, MQ01ABF050 6G 7mm 5.4K 500G HDD	16200433	
13	Hard disk drive, WD5000LPCX-24C6HT0 6G 7mm 5.4K 500G HDD	16200395	

Table 5. Parts list—Overall (Z410) (continued)

No.	FRU	FRU no.	CRU ID.
13	Hard disk drive, ST1000LM024 6G 9.5mm 5.4K 1T HDD	16200385	N
13	Hard disk drive, HTS541010A9E660 6G 9.5mm 5.4K 1T HDD	16200400	
13	Hard disk drive, TSB MQ01ABD100 6G 9.5mm 5.4K 1T HDD	16200429	
13	Hard disk drive, WD10JPCX-24UE4T0 6G 9.5mm 5.4K 1T HDD	16200393	
13	Hard disk drive, ST1000LM014 6G 9.5mm 1T SSHD	16200389	
13	Hard disk drive, ST500LM000 6G 7mm 500G SSHD	16200391	
14	AILZA Speaker L+R	90203976	
15	AILZA Lower Case Brown	90203977	
15	AILZA Lower Case White	90203978	
—	AC adapter (see “AC adapters” on page 105).		

Z510/Z510 Touch

Table 6. Parts list—Overall (Z510/Z510 Touch)

No.	FRU	FRU no.	CRU ID.
a-h	See “Miscellaneous parts” on page 104.		
1	LCD unit (see “LCD FRUs” on page 93.)		
2	Keyboard (see “Keyboard” on page 98.)		
3	AILZB Upper Case	90203995	N
3	AILZB Upper Case for Erazer	90203996	
4	Battery, 4S1P, 4cell, 48Wh, Sanyo, Z400Z500 SY L12S4K01 14.4V48Wh 4cellbty	121500113	
4	Battery, 4S1P, 4cell, 48Wh, Simplo, Zx10 SP/S L12M4F02 15V48Wh 4cellbty	121500202	
4	Battery, 4S1P, 4cell, 41.6Wh, Sanyo, Zx0 SY L12S4E21 14.4V41.6Wh 4cellbty	121500121	
4	Battery, 4S1P, 4cell, 41.6Wh, Simplo, Zx0 SP/L L12M4E21 14.8V41.6Wh 4cellbty	121500123	
5	AILZB MB UMA 37W	90004472	
5	AILZB MB UMA 47W	90004473	
5	AILZB MB N14P-GV2 1G	90004474	
5	AILZB MB N14P-GV2 2G	90004475	
5	AILZB MB W8S UMA 37W	90004476	
5	AILZB MB W8S UMA 47W	90004477	
5	AILZB MB W8S N14P-GV2 1G	90004478	
5	AILZB MB W8S N14P-GV2 2G	90004479	
5	AILZB MB W8P UMA 37W	90004480	
5	AILZB MB W8P UMA 47W	90004481	
5	AILZB MB W8P N14P-GV2 1G	90004482	
5	AILZB MB W8P N14P-GV2 2G	90004483	
5	AILZC MB UMA 37W	90004867	
5	AILZC MB UMA 47W	90004868	
5	AILZC MB DIS 1G	90004869	
5	AILZC MB DIS 2G	90004870	
5	AILZC MB W8S UMA 37W	90004871	
5	AILZC MB W8S UMA 47W	90004872	
5	AILZC MB W8S DIS 1G	90004873	
5	AILZC MB W8S DIS 2G	90004874	
5	AILZC MB W8P UMA 37W	90004875	
5	AILZC MB W8P UMA 47W	90004876	
5	AILZC MB W8P DIS 1G	90004877	
5	AILZC MB W8P DIS 2G	90004878	
6	Processor, Intel Haswell platform 35w, Intel I7-4702MQ 2.2G 4cPGA CPU	102500541	
6	Processor, Intel Haswell platform 35w, Intel I7-4700MQ 2.4G 4cPGA CPU	102500540	
7	AILZA FAN	90203964	
8	AILZA Thermal DIS 37W	90203961	
8	AILZA Thermal UMA 37W	90203962	

Table 6. Parts list—Overall (Z510/Z510 Touch) (continued)

No.	FRU	FRU no.	CRU ID.
8	AILZA Thermal UMA 47W	90203963	N
9	ODD, 9.5 Rambo Tray-in, HLDS GU70N 9.5 Rambo ODD	25205807	
9	ODD, 9.5 Rambo Tray-in, PLDS DU-8A5SH 9.5 Rambo ODD	25205806	
9	ODD, 9.5 Rambo Tray-in, PSN UJ8DB Slim Tray Rambo w/o bezel	25212030	
9	ODD, 9.5 Blueray Rambo, HLDS BU10N 9.5 BD Rambo ODD	25209260	
9	ODD, 9.5 Blueray Rambo, Panasonic UJ262 9.5 BD Rambo ODD	25209259	
10	AILZB ODD Board W/BL	90004470	
10	AILZB ODD Board WO/BL	90004471	
11	AILZB USB&Audio Board	90004468	
12	AILZB LED Board	90004469	
13	RAM, DDR3L 1600 2GB, Samsung, SS M471B5773DH0-YK0 DDR3L 1600 2GB	11200502	
13	RAM, DDR3L 1600 2GB, SK hynix, HMT425S6AFR6A-PB 2GB DDR3L 1600	11201299	
13	RAM, DDR3L 1600 2GB, Ramaxel, RMT3170ED58F8W-1600	11201835	
13	RAM, DDR3L 1600 2GB, Micron, MT4KTF25664HZ-1G6E1 2GB DDR3L 1600	11201967	
13	RAM, DDR3L 1600 4GB, Samsung, M471B5173BH0-YK0 4GB DDR3L 1600	11201966	
13	RAM, DDR3L 1600 4GB, SK hynix, HMT451S6AFR8A-PB 4GB DDR3L 1600	11201300	
13	RAM, DDR3L 1600 4GB, Ramaxel, RMT3170EB68F9W-1600 4GB DDR3L 1600	11201512	
13	RAM, DDR3L 1600 4GB, Sharetronic, SM321NQ08ICF 4GB DDR3L 1600	11201834	
13	RAM, DDR3L 1600 4GB, Micron, MT8KTF51264HZ-1G6J1 4GB DDR3L 1600	11201342	
13	RAM, DDR3L 1600 8GB, Samsung, M471B1G73BH0-YK0 8GB DDR3L 1600	11200504	
13	RAM, DDR3L 1600 8GB, SK hynix, HMT41GS6AFR8A-PB 8GB DDR3L 1600	11201301	
13	RAM, DDR3L 1600 8GB, Sharetronic SM322NW08IAF 8GB DDR3L 1600	11201514	
13	RAM, DDR3L 1600 8GB, Micron, MT16KTF1G64HZ-1G6E1 8GB DDR3L 1600	11201304	
14	WLAN, WiFi 2x2 BGN+BT4.0, Intel, 7260BN 2x2BN+BT PCIE HMC WLAN	20200412	
14	WLAN, WiFi 1x1 BGN Cbt BCM94313HMG 1x1BGN HMC	20200102	
14	WLAN, WiFi 1x1 BG Liteon HB125 1x1BGN HMC	20200223	

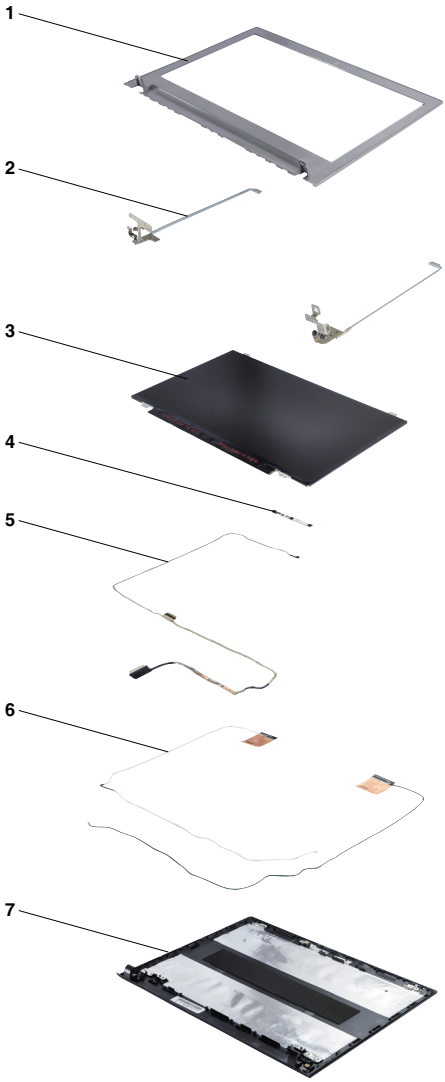
Table 6. Parts list—Overall (Z510/Z510 Touch) (continued)

No.	FRU	FRU no.	CRU ID.
14	WLAN, WiFi 1x1 BGN+BT4.0 Cbt BCM943142HM 1x1BGN+BT4.0 HMC	20200222	N
14	WLAN, WiFi 1x1 BGN+BT4.0 Liteon WB225 1x1BGN+BT4.0 HMC	20200224	
14	WLAN, WiFi 1x1 BGN+BT4.0 Liteon WB335 1x1BGN+BT4.0 HMC	20200437	
15	HDD/SSD 500G 5400rpm ST500LM012 6G 9.5mm 5.4K 500G HDD	16200387	
15	HDD/SSD 500G 5400rpm ST500LT012 6G 7mm 5.4K 500G HDD	16200383	
15	HDD/SSD 500G 5400rpm HTS545050A7E660 6G 7mm 5.4K 500G HDD	16200404	
15	HDD/SSD 500G 5400rpm MQ01ABF050 6G 7mm 5.4K 500G HDD	16200433	
15	HDD/SSD 500G 5400rpm WD5000LPCX-24C6HT0 6G 7mm 5.4K 500G HDD	16200395	
15	HDD/SSD 1TB 5400rpm ST1000LM024 6G 9.5mm 5.4K 1T HDD	16200385	
15	HDD/SSD 1TB 5400rpm HTS541010A9E660 6G 9.5mm 5.4K 1T HDD	16200400	
15	HDD/SSD 1TB 5400rpm TSB MQ01ABD100 6G 9.5mm 5.4K 1T HDD	16200429	
15	HDD/SSD 1TB 5400rpm WD10JPCX-24UE4T0 6G 9.5mm 5.4K 1T HDD	16200393	
15	HDD/SSD 1T Hybrid ST1000LM014 6G 9.5mm 1T SSHD	16200389	
15	HDD/SSD 500G Hybrid ST500LM000 6G 7mm 500G SSHD	16200391	
16	AILZB Speaker L+R	90204000	
17	AILZB Lower Case Brown	90204001	
17	AILZB Lower Case White	90204002	
—	AC adapter (see “AC adapters” on page 105).		

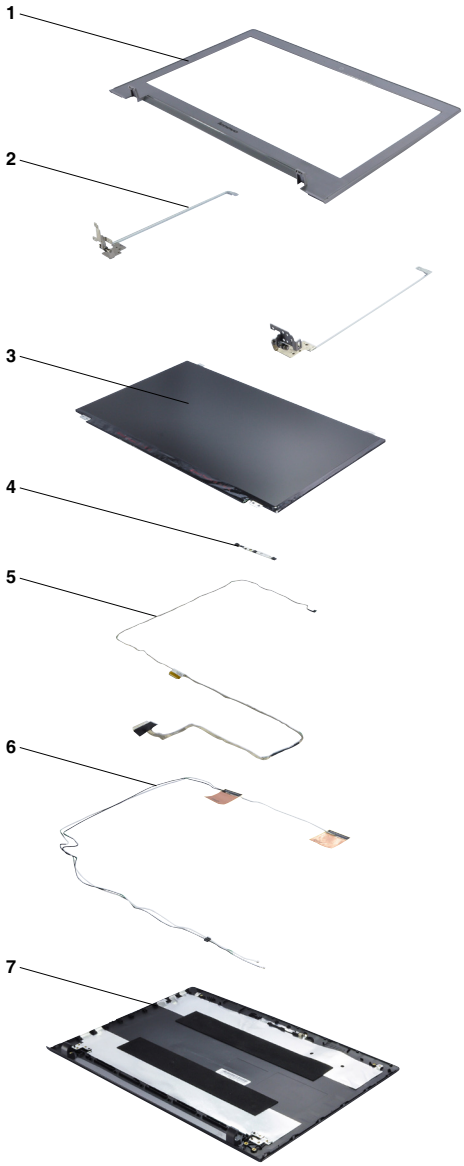
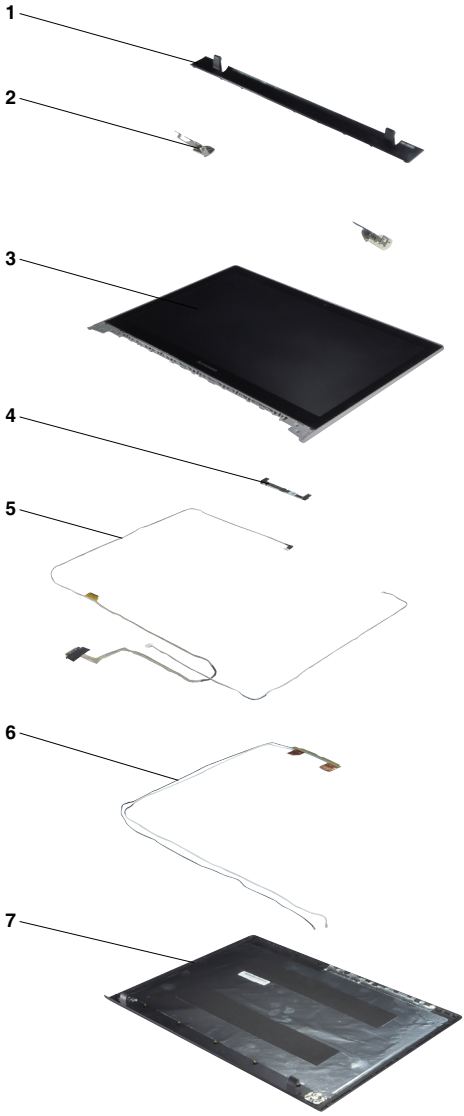
LCD FRUs

In Lenovo Z410/Z510/Z510 Touch, there are following types of LCDs.

- “14-in. HD TFT”



- “15.6-in. HD TFT”



- “15.6-in. Touch HD TFT”